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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,619	12/05/2003	Heike Pahl	LEDER-0001-D01	7893

23599 7590 03/27/2007

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EXAMINER	
BUNNER, BRIDGET E	
ART UNIT	**PAPER NUMBER**
1647	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/727,619	PAHL, HEIKE	
	Examiner	Art Unit	
	Bridget E. Bunner	1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2006 and 06 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4,13,16,21,22,24 and 30-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4, 13, 16, 21, 22, 24, 30-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/830,189.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☒ Other: *Appendix A*.

DETAILED ACTION

Status of Application, Amendments and/or Claims

The amendments of 22 December 2006 and 06 March 2007 have been entered in full. Claims 4, 13, 16, 21, 22, and 24 are amended. Claims 30-38 are added. Claims 1-3, 5-12, 14-15, 17-20, 23, and 25-29 are cancelled.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

In the response of 22 December 2006, Applicant argues that claim 16, which is dependent upon examined claim 4, stands improperly restricted. After further consideration, the restriction requirement between Group I (original claims 1, 4, 13, 15, 18, 21, 22, 24, and 27) and product claim 16 only is hereby *withdrawn*. Group I and claim 16 are rejoined.

Claims 4, 13, 16, 21-22, 24, and 30-38 are under consideration in the instant application.

Withdrawn Objections and/or Rejections

1. The objection to the specification at pg 5-6 of the previous Office Action (25 July 2006) are *withdrawn* in view of Applicant's argument (22 December 2006).

2. The objection to the drawings as set forth at pg 5 of the previous Office Action (25 July 2006) is withdrawn in view of cancellation of the drawings and the amended specification (22 December 2006).

3. The objections to claims 13 and 18 at pg 6 of the previous Office Action (25 July 2006) are *withdrawn* in view of the amended and cancelled claims (22 December 2006).

4. The rejections of claim 18 under 35 U.S.C. § 112, second paragraph and 35 U.S.C. § 101 ("use of") as set forth at pg 6-7 of the previous Office Action (25 July 2006) are withdrawn in view of the cancelled claim (22 December 2006).

5. The rejection of claims 24 and 27 under 35 U.S.C. § 112, first paragraph (enablement) (diagnostic use of the polypeptide) as set forth at pg 7-8 of the previous Office Action (25 July 2006) is *withdrawn* in view of amended claim 24 and cancellation of claim 27 (22 December 2006).

6. The rejection of claims 1, 15, 18, 24, and 27 under 35 U.S.C. §112, first paragraph (scope of enablement) as set forth at pg 8-12 of the previous Office Action (25 July 2006) is *withdrawn* in view of amended claim 24 and the cancellation of claims 1, 15, 18, and 27 (22 December 2006).

7. The rejection of claims 1, 13, 15, 18, 24, and 27 under 35 U.S.C. § 112, first paragraph (written description) as set forth at pg 14-17 of the previous Office Action (25 July 2006) is *withdrawn* in view of the amended and cancelled claims (22 December 2006).

8. The rejection of claim 4 under statutory double patenting and claims 1, 13, 21, 22, and 27 under non-statutory obviousness double patenting as set forth at pg 17-19 of the previous Office Action (25 July 2006) are *withdrawn* in view of the cancelled claims and the filing of the terminal disclaimer on 22 December 2006.

Priority

9. It is noted that this application appears to claim subject matter disclosed in prior Application No. 09/830,189, filed 8/06/2001. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data

sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications.

The basis for this objection is set forth at pg 3-4 of the previous Office Action of 25 July 2006. The response of 22 December 2006 did not specifically address this issue.

Claim Rejections - 35 USC § 112, first paragraph

Enablement

10. Claims 13, 21, 22, 30-38 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a process of diagnosing polycythaemia vera comprising detecting the PRV-1 polynucleotide of SEQ ID NO: 1 in a sample, does not reasonably provide enablement for the invention where the polynucleotide comprises fragments of SEQ ID NO: 1 or wherein the recited diseases encompass any disturbance of the haematopoietic system. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. The basis for this rejection is set forth for claims 13, 21, and 22 at pg 12-14 of the previous Office Action (25 July 2006).

Applicant's arguments (22 December 2006), as they pertain to the rejections have been fully considered but are not deemed to be persuasive for the following reasons.

(i) At page 9 of the Response of 22 December 2006, Applicant asserts that the specification coupled with a skilled worker's knowledge provides adequate guidance to make and use the

invention. Applicant argues that the specification provides both general and specific guidance regarding the structural features and utility of the claimed compounds.

Applicant's arguments have been considered but are not found to be persuasive. Regarding the recitation of fragments of SEQ ID NO: 1 (in claims 4, 21, 22) to be used as a probe for detection purposes, the specification of the instant application does not teach which fragments are specific for SEQ ID NO: 1 or which fragments would hybridize only to SEQ ID NO: 1. Fragments of the nucleic acid sequence of SEQ ID NO: 1 may represent parts of conservative regions and hybridize to other nucleic acid sequences. As such, it would require undue experimentation to make and use the invention in a manner commensurate in scope with the claims. Additionally, as discussed in the previous Office Action of 25 July 2006, the specification asserts that PRV-1 is overexpressed in patients suffering from polycythaemia vera. The literature supports that PRV-1 mRNA is overexpressed in polycythaemia vera patients (see Pahl, Klippel et al, and Temerinac et al. 2000). However, in each case, the full coding sequence of PRV-1 was detected. Neither the specification nor the literature provides any support for the detection or use of PRV-1 DNA fragments to diagnose polycythaemia vera. A large quantity of experimentation is necessary to determine which fragments of SEQ ID NO; 1 can be used as a target or a probe in the detection of polycythaemia vera.

(ii) At the bottom of page 9 of the Response, Applicant contends that the specification provides detailed guidance on "how to use" the polypeptides of the instant invention for the claimed methods. Applicant refers pages 9-11 and Examples 2-4 of the specification. At page 8 of the Response, Applicant submits that the role of PRV-1 in the hematopoietic differentiation

pathway, particularly in the case of granulocytes, is further corroborated by numerous art references. At the top of page 9, Applicant also states that one of ordinary skill in the art could routinely screen for the claimed malignancies by analyzing expression and/or levels of PRV-1 gene or its product in any relevant biological specimen (for example, blood, tissues, or biopsy samples).

Applicant's arguments have been considered but are not found to be persuasive. Regarding a process for diagnosing disturbances of the hematopoietic system, as recited in claims 33-36 and 38, neither the specification nor the art provide support for the concept that PRV-1 nucleic acids can be used diagnostically to detect any haematopoietic disturbance other than polycythaemia vera. As discussed in the previous Office Action of 25 July 2006, Temerinac et al. (2000, Blood 95:2569-2576) tested whether PRV-1 nucleic acids displayed altered expression levels in the haematopoietic diseases chronic myelogenous leukemia, acute myelogenous leukemia, thrombocythemia or secondary erythrocytosis. Specifically, Temerinac et al. disclose that the PRV-1 gene is not expressed in mononuclear cells from patients with acute and chronic myelogenous leukemia or in granulocytes from patients with essential thrombocythemia or secondary erythrocystosis (abstract; pg 2572-2573; 2575, column 2). Thus, based upon the instant specification and the state of the art, undue experimentation would be required of the skilled artisan to determine a nexus between all possible diseases or disorders of the hematopoietic system (other than polycythaemia vera) and expression of the PRV-1 gene. Although the instant specification discloses that the PRV-1 protein of SEQ ID NO: 2 stimulates hematopoietic precursors to form erythroid cells (red blood cells) (Examples 2 and 3), there are

no methods or working examples to indicate that one skilled in the art can diagnose, for instance, anemia, by detection of the PRV-1 gene.

Additionally, newly submitted claims 30-32 and 34-36, simply recite "detecting a PRV-1 polynucleotide" with a kit. The specification discloses PRV-1 fragments and modified forms (page 3, lines 21-29; page 4, lines 27-36). Thus, the Examiner has broadly interpreted the phrase "a PRV-1 polynucleotide" as reading upon the detection of any PRV-1 variant or fragment. However, the specification of the instant application does not teach which variants or fragments of PRV-1 are specific for diagnosis of any disease and undue experimentation would be required of the skilled artisan to determine such.

Proper analysis of the Wands factors was provided in the previous Office Action. Due to the large quantity of experimentation necessary to determine what specific diseases other than polycythaemia vera are associated with an altered level or form of PRV-1 nucleic acid, the lack of direction/guidance presented in the specification regarding same, the absence of working examples directed to diseases other than polycythaemia vera, the complex nature of the invention, the state of the prior art as reviewed above, and the breadth of the claims, undue experimentation would be required of the skilled artisan to make and/or use the claimed invention in its full scope.

11. Claim 16 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 16 is directed to a pharmaceutical preparation comprising a polynucleotide according to claim 4 and at least one pharmaceutically acceptable excipient.

It is noted that the Examiner has interpreted the phrase "pharmaceutical preparation" as an intended use of the polynucleotide. Regarding treatment methods using polynucleotides, at the top of page 12, the specification of the instant application teaches that "[g]ene therapy methods are first and foremost used in this connection. Cells can be isolated from the patient and transfected with a polynucleotide according to the invention (ex-vivo manipulation), after which they are then returned to the patient. It is also possible to conceive of methods in which the polynucleotides according to the invention gain access into the target cells by means of viral transfer. Expression of the inserted nucleic acids then leads to haematopoietic activity." However, the specification does not disclose any methods or working examples that indicate the polynucleotide of SEQ ID NO: 1 is a therapeutic for all possible hematopoietic diseases, particularly pancytopenias and pancytopathies. Undue experimentation would be required of the skilled artisan to determine a nexus between PRV-1 expression and all possible diseases. Furthermore, the specification does not teach any methods or working examples that indicate a PRV-1 nucleic acid is introduced and expressed in the cell of an organism for therapeutic purposes. The disclosure in the specification is merely an invitation to the artisan to use the current invention as a starting point for further experimentation. For example, the specification does not teach what type of vector would introduce the PRV-1 nucleic acid into the cell or in what quantity and duration. Relevant literature teaches that since 1990, about 3500 patients have been treated via gene therapy and although some evidence of gene transfer has been seen, it has generally been inadequate for a meaningful clinical response (Phillips, A., J Pharm

Pharmacology 53: 1169-1174, 2001; abstract). Additionally, the major challenge to gene therapy is to deliver DNA to the target tissues and to transport it to the cell nucleus to enable the required protein to be expressed (Phillips, A.; pg 1170, ¶ 1). Phillips also states that the problem with gene therapy is two-fold: 1) a system must designed to deliver DNA to a specific target and to prevent degradation within the body, and 2) an expression system must be built into the DNA construct to allow the target cell to express the protein at therapeutic levels for the desired length of time (pg 1170, ¶ 1). Therefore, undue experimentation would be required of the skilled artisan to introduce and express a PRV-1 nucleic acid into the cell of an organism.

Due to the large quantity of experimentation necessary to determine the diseases in need of PRV-1 and to introduce and express a PRV-1 nucleic acid into a cell of an organism; the lack of direction/guidance presented in the specification regarding how to introduce a PRV-1 nucleic acid in the cell of an organism to be able produce that PRV-1; the absence of working examples directed to same; the complex nature of the invention; and the state of the prior art which establishes the unpredictability of transferring genes into an organism's cells, undue experimentation would be required of the skilled artisan to make and/or use the claimed invention in its full scope.

Written Description

12. Claims 21, 22, 30-32, and 34-36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the

claimed invention. The basis for this rejection is set forth at pg 14-17 of the previous Office Action (25 July 2006).

The claims are directed to a kit comprising a PCR primer against one PRV-1 polynucleotide of claim 4. The claims recite a kit comprising at least one polynucleotide according to claim 4, or a fragment thereof, wherein said fragment hybridizes to polycythaemia rubra vera-1 polynucleotide. The claims are also drawn to processes of diagnoses comprising detecting a PRV-1 polynucleotide.

The Examiner was unable to determine if Applicant addressed this particular rejection in the Response of 22 December 2006. The Examiner was only able to locate a section at the middle of page 9 of the Response, where Applicant asserts that the specification, coupled with a skilled worker's knowledge provides adequate guidance to make and use the claimed libraries. Applicant contends that the specification provides both general and specific guidance regarding the structural features and utility of the claimed compounds.

Applicant's argument has been fully considered but is not found to be persuasive. Applicant has not described or shown possession of all PRV-1 polynucleotide fragments or variants that still retain the function of SEQ ID NO: 1 and the methods of using such. Even one skilled in the art could not envision the detailed chemical structure of all or a significant number of encompassed PRV-1 polynucleotides, and therefore, would not know how to make or use them. To provide evidence of possession of a claimed genus, the specification must provide sufficient distinguishing identifying characteristics of the genus. The factors to be considered include disclosure of complete or partial structure, physical and/or chemical properties, functional characteristics, structure/function correlation, methods of making the claimed product,

or any combination thereof. In this case, there is no identification of any particular portion of the polynucleotide structure that must be conserved in order to conserve the required function. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method of making. The claimed product itself is required.

Additionally, with regard to claims 22, 31, and 35, simply reciting that the fragment hybridizes to the PRV-1 polynucleotide in the claims does not yield adequate written description of the polynucleotides encompassed. The claim encompasses an infinite number of polynucleotide fragments that hybridize to the nucleic acid sequence of SEQ ID NO: 1. These polynucleotides may be structurally and functionally divergent from the polynucleotide of SEQ ID NO: 1.

13. Claims 32 and 36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

Claim 32 is directed to a process for diagnosing polycythaemia vera comprising detecting the expression of a PRV-1 polynucleotide and comparing said expression to a reference standard. Claim 36 is directed to a process for diagnosing disturbances of the hematopoietic system comprising detecting the expression of a PRV-1 polynucleotide and comparing said expression to a reference standard.

The specification as originally filed does not provide adequate written description for detecting the expression of a PRV-1 polynucleotide and comparing said expression to a reference standard. It is not expressly asserted, nor does it flow naturally from the specification. Although Applicant pointed out where support could be found for the new claims (specification page 12 and the Examples), the Examiner was unable to locate support.

35 USC § 112, second paragraph

14. Claims 13 and 30-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

15. Claims 32 and 36 are rejected as being indefinite because it is not clear how a disease can be diagnosed by detecting the expression of a PRV-1 polynucleotide and comparing it to a *polypeptide* reference standard.

Claim Rejections - 35 USC § 102(a)

16. Claims 4, 13, 16, 21-22, 24, and 30-38 are rejected under 35 U.S.C. 102(a) as being anticipated by Temerinac et al. (Leukemia Res 23(Suppl 1): S18, April 1999; "Temerinac 1999") as evidenced by Temerinac et al. (Blood 95(8): 2569-576, 2000; "Temerinac 2000"). The basis for this rejection is set forth for claims 1, 4, 13, 15, 18, 21-22, 24, and 27 at page 19-20 of the previous Office Action (25 July 2006).

Applicant states at page 10 of the Response of 22 December 2006 that upon the Examiner's verification of Applicant's claim to priority, in view of the verified translation of priority document (DE 198 49 044.5), the rejection will be rendered moot.

Applicant's argument has been fully considered but is not found to be persuasive. The Examiner was unable to locate a certified translation of the foreign priority document, GERMANY 198 49 044.5, in the instant application or the parent case, 09/830,189. Thus, Applicant cannot rely upon the foreign priority papers to overcome this rejection (MPEP § 201.15).

Claim Rejections - 35 USC § 102(e)

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

17. Claims 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Sheppard et al. (U.S. Patent 6,084,088; priority to May 6, 1997).

Sheppard et al. teach a polynucleotide that is 98.4% identical to the PRV-1 nucleic acid sequence of SEQ ID NO: 1 of the instant application (see SEQ ID NO: 1 of Sheppard et al.; see also sequence alignment attached to the instant Office Action as Appendix A). Sheppard et al. teach an oligonucleotide probe or primer comprising at least 14 contiguous nucleotides of the polynucleotide of SEQ ID NO: 1 from nucleotide 34 to nucleotide 1344 (column 3, lines 23-26). Sheppard et al. disclose PCR primers in a 96-well microtiter container in combination with other compositions for detection reactions, such as reaction buffer (column 33).

Conclusion

No claim is allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bridget E. Bunner whose telephone number is (571) 272-0881. The examiner can normally be reached on 8:30-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda Brumback can be reached on (571) 272-0961. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BEB
Art Unit 1647
15 March 2007

Bridget E. Bunner

BRIDGET BUNNER
PATENT EXAMINER

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RESULT 15
US-09-073-569-1
; Sequence 1, Application US/09073569
; Patent No. 6084088
;  GENERAL INFORMATION:
;    APPLICANT:  Sheppard, Paul O.
;    APPLICANT:  Grossmann, Angelika
;    TITLE OF INVENTION:  NOVEL TUMOR ANTIGENS
;    NUMBER OF SEQUENCES:  15
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  ZymoGenetics, Inc.
;      STREET:  1201 Eastlake Avenue East
;      CITY:  Seattle
;      STATE:  WA
;      COUNTRY:  USA
;      ZIP:  98102
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/073,569
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Sawislak, Deborah A
;      REGISTRATION NUMBER:  37,438
;      REFERENCE/DOCKET NUMBER:  97-14
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  206-442-6672
;      TELEFAX:  206-442-6678
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1733 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      NAME/KEY:  Coding Sequence
;      LOCATION:  34...1344
;      OTHER INFORMATION:
US-09-073-569-1

  Query Match             98.4%;  Score 1574.6;  DB 3;  Length 1733;
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Qy        560 AGTCCAGGGATGCATGCCCCAGCCAGGTTGCAACCTGCTCAATGGGACACAGGAAATTGG 619
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Qy        620 GCCCGTGGGTATGACTGAGAACTGCAATAGGAAAGATTTTCTGACCTGTCATCGGGGGAC 679
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Db        618 GCCCGTGGGTATGACTGAGAACTGCAATAGGAAAGATTTTCTGACCTGTCATCGGGGGAC 677

Qy        680 CACCATTATGACACACGGAAACTTGGCTCAAGAACCCACTGATTGGACCACATCGAATAC 739
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        678 CACCATTATGACACACGGAAACTTGGCTCAAGAACCCACTGATTGGACCACATCGAATAC 737

Qy        740 CGAGATGTGCGAGGTGGGGCAGGTGTGTCAGGAGACGCTGCTGCTCATAGATGTAGGACT 799
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        738 CGAGATGTGCGAGGTGGGGCAGGTGTGTCAGGAGACGCTGCTGCTCATAGATGTAGGACT 797

Qy        800 CACATCAACCCTGGTGGGGACAAAAGGCTGCAGCACTGTTGGGGCTCAAAATTCCCAGAA 859
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Db        798 CACATCAACCCTGGTGGGGACAAAAGGCTGCAGCACTGTTGGGGCTCAAAATTCCCAGAA 857

Qy        860 GACCACCATCCACTCAGCCCCTCCTGGGGTGCTTGTGGCCTCCTATACCCACTTCTGCTC 919
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        858 GACCACCATCCACTCAGCCCCTCCTGGGGTGCTTGTGGCCTCCTATACCCACTTCTGCTC 917

Qy        920 CTCGGACCTGTGCAATAGTGCCAGCAGCAGCAGCGTTCTGCTGAACTCCCTCCCTCCTCA 979
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        918 CTCGGACCTGTGCAATAGTGCCAGCAGCAGCAGCGTTCTGCTGAACTCCCTCCCTCCTCA 977

Qy        980 AGCTGCCCCCTGTCCCAGGAGACCGGCAGTGTCCTACCTGTGTGCAGCCCCTTGGAACCTG 1039
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Db        978 AGCTGCCCCTGTCCCAGGAGACCGGCAGTGTCCTACCTGTGTGCAGCCCCTTGGAACCTG 1037

Qy       1040 TTCAAGTGGCTCCCCCCGAATGACCTGCCCCAGGGGCGCCACTCATTGTTATGATGGGTA 1099
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Qy       1100 CATTCATCTCTCAGGAGGTGGGCTGTCCACCAAAATGAGCATTCAGGGCTGCGTGGCCCA 1159
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy       1160 ACCTTCCAGCTTCTTGTTGAACCACACCAGACAAATCGGGATCTTCTCTGCGCGTGAGAA 1219
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Db       1158 ACCTTCCAGCTTCTTGTTGAACCACACCAGACAAATCGGGATCTTCTCTGCGCGTGAGAA 1217

Qy       1220 GCGTGATGTGCAGCCTCCTGCCTCTCAGCATGAGGGAGGTGGGGCTGAGGGCCTGGAGTC 1279
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Qy       1280 TCTCACTTGGGGGGTGGGGCTGGCACTGGCCCCAGCGCTGTGGTGGGGAGTGGTTTGCCC 1339
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Qy       1340 TTCCTGCTAACTCTATTACCCCCACGATTCTTCACCGCTGCTGACCACCCACACTCAACC 1399
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy       1400 TCCCTCTGACCTCATAACCTAATGGCCTTGGACACCAGATTCTTTCCCATTCTGTCCATG 1459
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Db       1398 TCCCTCTGACCTCATAACCTAATGGCCTTGGACACCAGATTCTTTCCCATTCTGTCCATG 1457

Qy       1460 AATCATCTTCCCCACACACAATCATTCATATCTACTCACCTAACAGCAACACTGGGGAGA 1519
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Qy       1520 GCCTGGAGCATCCGGACTTGCCCTATGGGAGAGGGGACGCTGGAGGAGTGGCTGCATGTA 1579
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Qy       1580 TCTGATAATACAGACCCTGTC 1600
                ||||||||||||||||||||
Db       1578 TCTGATAATACAGACCCTGTC 1598
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Search completed: July 11, 2006, 10:48:01
Job time : 327 secs